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PACIFIC OCEANIC FISHERY
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PREPARATION OF THREE FISHES OF THE PACIFIC COAST

Shark, Shad, and Lingcod

Prepared in the Division of Commercial Fisheries

Our Pacific coast waters teem with a score of fishes regularly sought and sold for table use: white sea bass, shad, halibut, salmon, smelt, sablefish, rockfish, sole, lingcod, and more recently, shark. These and many others are available fresh practically the year-round in most coastal markets, and are prepared in many ways.

In this leaflet recipes are given for cooking three of these species: shark, shad, and the so-called lingcod.

SHARK

Properly prepared for the table, shark meat tastes very much like that of other popular food fishes. Its cooked meat is firm, and rather suggests that of the swordfish in texture.

The soupfin shark, the one most important to the consumer because of the high vitamin A content of its liver oil as well as the food value of its flesh, ranges up to 5 and 6 feet in length and from 25 to 40 pounds in weight. Fillets or transverse sections are cut which are later reduced to convenient steaks or cutlets for market. When cooked, the broad, dark band under the skin along each side of the shark turns white.

A popular way to serve the fillets is to bake them in Spanish sauce. The meat of this shark is also excellent when kippered, comparing favorably with kippered sablefish or salmon. The Fish and Wildlife Service laboratory suggests the following tested recipes for preparing shark.

NOTE. - Fishery Leaflet 106, "How to Cook Fish," may be obtained from the Fish and Wildlife Service, U. S. Department of the Interior, Chicago 54, Illinois.

Oven-Fried Shark

2 pounds soupfin shark fillets

$\frac{1}{2}$ cup milk

$\frac{1}{2}$ tablespoons salt

1 cup fine bread crumbs

$\frac{1}{3}$ cup cooking oil or melted

vegetable shortening

Wipe fillets with damp cloth and dry thoroughly. Add salt to milk and stir until dissolved. Dip each fillet first in milk, then in bread crumbs, and lay in a greased shallow baking pan. Top each layer of fish with the melted fat, and bake in a preheated oven at 375° F. for 25 minutes.

SHAD

Once unknown to the Pacific, shad were transplanted from the Atlantic Ocean to California's Sacramento River in 1871. Five years later this member of the herring family had become established in Pacific coast waters from British Columbia south to San Diego. In general, the seasons of greatest commercial abundance are from May to July in Washington and Oregon; and from March to May in California.

In earlier days, these fish were shipped in ice to eastern markets by the carload. During recent years, however, this practice has lessened considerably.

Adult shad, like salmon, enter the rivers in early spring or summer to spawn in fresh waters.

The average market length is about a foot-and-a-half; weight, about 5 pounds; shad are usually sold whole, but boned shad fillets¹ have become a market item of importance. Costs are higher for the fillets but many prefer them.

Baking Shad to Soften the Bones

A New England recipe for cooking shad so that the bones melt away is as follows:

"Place shad on rack in the baking pan to keep it out of the water, filling the pan below. An upturned tin of any kind will do if you haven't a rack. You'll need two or three cups of water in the pan. Then, with the cover on, bake for five hours--not four or three, but five whole hours--basting frequently and renewing water if necessary. A tablespoon of finely chopped onion, chopped celery and a bay leaf added to the water in the pan gives a delicious flavor to the shad. A few minutes before serving, remove the cover and let the shad brown. Bake at 300° F. temperature."

¹/ Directions for the boning of shad are given in Investigational Report No. 38, "Marketing of Shad on the Atlantic Coast." Obtainable from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Price 10¢ a copy.

The Fish and Wildlife Service recommends these laboratory-tested recipes:

Borsch Salad

3/4 cup cooked shad flakes	2 teaspoons onion juice or
1 package lemon flavored gelatin	grated onion
1 cup hot water	1 tablespoon prepared horse-radish
3/4 cup beet juice	1/2 cup cooked diced beets
3 tablespoons vinegar	3/4 cup celery diced
1/2 teaspoon salt	

Dissolve gelatin in hot water. Add beet juice, vinegar, salt, onion and horse-radish. Chill. When slightly thickened, fold in celery, beets, and fish. Turn into mold and chill until firm. Unmold on crisp salad greens and garnish with mayonnaise.

Golden Broiled Shad Steaks

2 pounds shad steaks, 1/2 inch thick	1 teaspoon salt
1 tablespoon grated onion	1/4 teaspoon pepper
2 tablespoons lemon juice	1/4 teaspoon marjoram
4 tablespoons butter or fortified margarine	2 tablespoons minced parsley

Wash and dry shad steaks. Combine the remaining ingredients except parsley. Lay the shad steaks on a greased broiler rack, and pour half of the above mixture over them. Place in a pre-heated broiler so that the steaks are about 2 inches from the heat, and broil for about 10 minutes. Turn steaks, pour the rest of the above mixture over them, and broil for about 10 minutes. Garnish with the parsley. Serve hot.

LINGCOD

From Sitka to Santa Barbara the lingcod is an abundant food fish, and untold numbers swim in this long stretch of western waters.

The lingcod, which is not strictly a cod, bears other names that wrongly link it with the cultus cod, blue cod, and buffalo cod. Big-headed, sharp-snouted, the fish's capable-looking rows of teeth are a feature of its large mouth and jutting lower jaw. Mottled brown above and lettuce green beneath, it preys on smaller fish, often ascending coastal rivers in search of food. Its market length may be as much as three feet, with a range of from 5 to 40 pounds in weight.

Ready-to-fry-or-bake fillets or steaks may be selected and the latter make excellent baking cuts, or a 5-pound whole fish lends itself well to this method of preparation:

Baked Lingcod

4 pounds lingcod, whole fish
 $\frac{1}{2}$ cup flour
2 teaspoons salt

$\frac{1}{2}$ teaspoon pepper
4 slices bacon
 $1\frac{1}{2}$ cups stock (see below)

Remove tail, head, fins, viscera and, if desired, backbone. (You may ask your fish dealer to do this for you.) Wipe fish with damp cloth, and cut 4 two-inch gashes across one side of fish. Dust outside of fish with the flour, salt, and pepper mixture, and lay in a shallow baking-pan with gashed side up. Pour stock around fish and baste. Lay bacon across top of fish and bake in a pre-heated oven 375° F. for one hour. When half done, baste again with stock.

Stock

$\frac{1}{2}$ cup celery stalks and tops, cut fine
1 tablespoon parsley, cut fine
1 small onion, chopped
1 tablespoon green pepper, chopped

2 cups hot water
2 tablespoons bacon fat or
bacon cut in bits
 $1\frac{1}{2}$ teaspoons salt
 $\frac{1}{2}$ teaspoon pepper

Simmer above ingredients in a covered utensil for 40 minutes. Strain, and use stock with fish.

Gravy

$\frac{1}{2}$ cup stock
1 tablespoon bacon fat or
vegetable shortening

juices from baking pan
2 tablespoons flour

Melt fat in shallow pan, and brown flour in fat. Gradually add stock and juices and cook, stirring until thick.